



United States
Department of
Agriculture

Forest
Service

Arizona Zone
Entomology and
Pathology

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File Code: 3410

Date: November 20, 2000

Route To:

Subject: 2000 Insect and Disease Aerial Detection Survey
To: Area Director
Bureau of Indian Affairs
Navajo Area Office
Branch of Forestry
P.O. Box 1060
Gallup, NM 87305

The Arizona Zone of Entomology and Pathology conducted the annual insect and disease aerial survey for the Navajo Indian Reservation on August 28-31, and September 1, 2000. This letter provides a summary of insect and disease conditions seen on the Reservation at the time of these flights.

Mortality in the ponderosa pine type due to bark beetles increased in 2000 (300 acres) from 1999 (82 acres). Mortality in 2000 was attributed to *Ips* spp. (23 acres), and western pine beetle (277 acres). Small pockets of mortality usually ranged from 1 to 10 trees, and was scattered throughout the ponderosa pine type on the Reservation. Pinyon *Ips* mortality was recorded on 90 acres of the woodlands.

Aspen defoliation decreased from 10,850 acres in 1999 to 2,592 acres in 2000. Defoliation ranged from light to heavy (light, 981 acres and heavy 1,611 acres) and was scattered throughout the Chuska Mountains. A late season frost in 1999 was responsible for the majority of the heavy Aspen defoliation, this did not occur in 2000. Western spruce budworm defoliation increased in 2000 to 12,502 acres (light defoliation, 6,578 acres; heavy defoliation, 5,924 acres) from 10,145 acres in 1999. Defoliation was scattered throughout the Chuska and Lukachukai Mountains.

Spruce mortality decreased from 2,169 acres in 1999 to 196 acres in 2000. Mortality occurred in small pockets of 1 to 10 trees. The majority of the mortality was recorded in the Chuska Mountains. Douglas-fir mortality decreased from 2 acres in 1999 to 0 acres recorded in 2000.

Pinyon sawfly, in conjunction with pinyon needle scale, continue to defoliate pinyon trees near Canyon de Chelly, although the populations have decreased considerably. Only light defoliation was recorded on 34 acres in 2000, 146 acres in 1999 on the National Monument and the surrounding Reservation lands down from 1998, when 52,550 acres of light to heavy defoliation were recorded. The Arizona Zone will continue to include this area in the annual aerial detection survey.

Drought damage was recorded throughout Arizona with 7,928 acres of light damage recorded on the Navajo Indian Reservation. Evidence of fire was recorded on 1780 acres of the Reservation.

Electronic format copies of the map files and data are available to the Area Office, Bureau of Indian Affairs staff and to Navajo Forestry for use on any projects where this information would be of value. Please forward this letter to the appropriate personnel.



If you have any questions concerning the survey, the information included here, or the availability of maps, please feel free to contact Bobbe Fitzgibbon (520-556-2072) or Steve Dudley (520-556-2071).

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Arizona Zone Leader

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